

Chapter 18 – Displaying and analysing data

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Displaying and analysing data

Categorical data is data that can be put into named groups (categories).
For example, *favourite colour, pet owned, names of people voted for, etc.*

Example

This table shows how students in Room 4 get to school.

Ways of getting to school	Frequency
Walk	12
Cycle	4
Bus	5
Car	9
Total	30

Frequency is how often something happens. In this case, it is the number of students who chose each category.

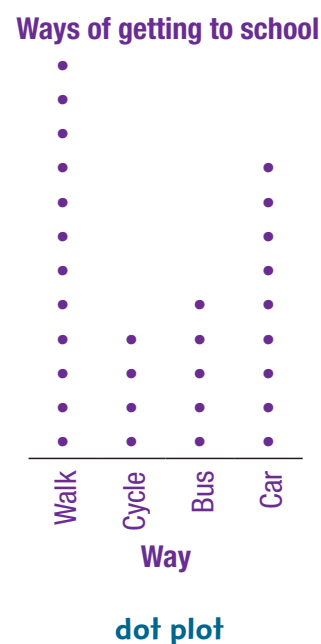
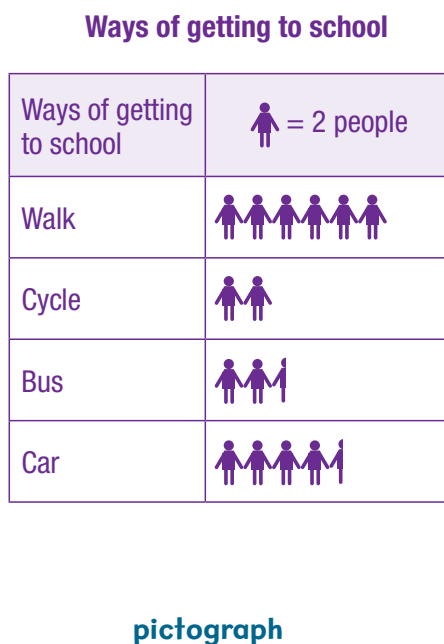
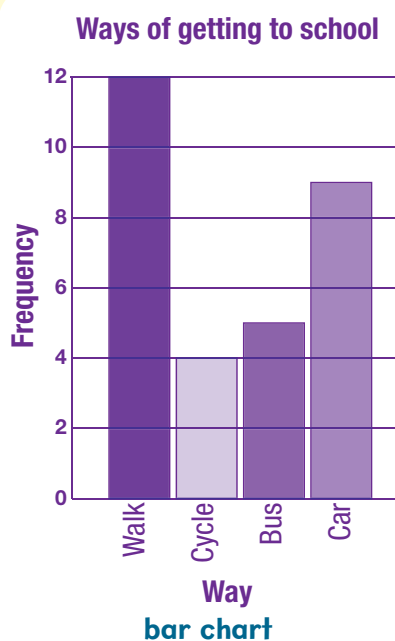
NUMERACY STRATEGY

Use your addition strategies when adding up frequencies.

Frequency table

Categorical data is often displayed on a **bar chart**, **pictograph** or **dot plot**.
From these graphs, **frequencies can be compared**.

Examples

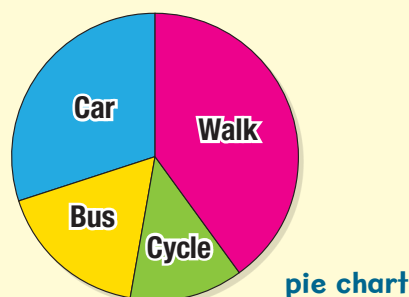


Categorical data can also be shown on a **pie chart** or **strip graph**.

From these, the **fractions** in each category can be analysed or **compared**.

This pie chart was drawn for the information in the table at the top of the page.

Ways of getting to school



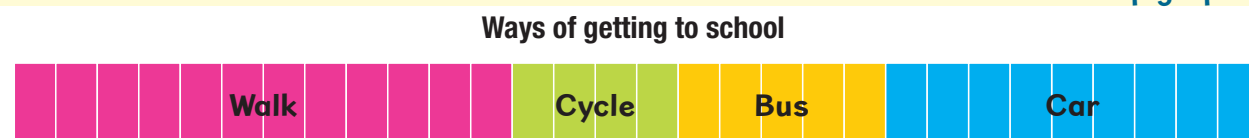
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Example

This strip graph also shows how students in Room 4 get to school.

strip graph



This strip graph is divided into 30 equal parts because there are 30 people in Room 4.

It shows that the fraction who

walk is $\frac{12}{30}$ cycle is $\frac{4}{30}$ bus is $\frac{5}{30}$ and come by car is $\frac{9}{30}$

The largest fraction of students walk to school.



Discussion

- Which graph would it be better to use when deciding if these are correct?
 - Seven more students walk than come to school by bus.
 - A greater fraction of students walk to school than come any other way.
- Why do you think the school might want to know how students come to school?

Numerical data is data that is collected by counting or measuring and is shown as numbers.

Examples

Number of fillings people have in their mouth

Scores students got for a project

Height, in cm, of students in a class

Numerical data can be shown on a dot plot, stem and leaf plot and sometimes on a pie chart or strip graph (if there are not too many different numbers).



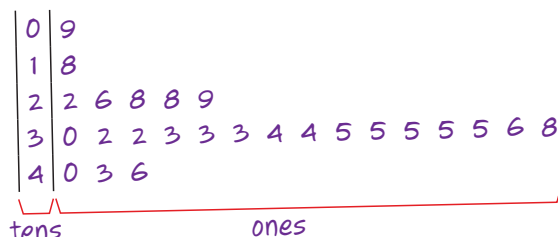
Examples



Number of teeth in the mouths of Room 10



Science project marks (out of 50)



Discussion

- You wouldn't show this data on a strip graph. Why not?

